



Newsletter Issue 13: June 2002

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Change of Name

At the AGM of the RIGS Group in February 2002 it was unanimously agreed to change the name of the Group to Herefordshire and Worcestershire Earth Heritage Trust.

Heritage Lottery Fund Award

The Trust has just been informed that its application for support to carry out an 'Earth Heritage Education Programme' has been successful. We have been awarded £100,000 over 3 years. The proposal is to locate and develop 12 trails and to design and print 12 trail guides and interpretation panels illustrating the geology and landscape of Herefordshire and Worcestershire. In more detail this involves:

- The design, production and siting of information boards at relevant locations. The design and printing of trail guides and of simple information/educational leaflets.
- Ensuring that the guides, leaflets and interpretation boards give clear and concise details relating to rocks, minerals, fossils and landscapes in the countryside and in the built environment. There will be links to biodiversity and archaeology.
- Ensuring that the countryside trails are based on public rights of way.
- Making the guides available to the general public via Tourist Information Centres, museums, countryside centres and bookshops.
- Promoting interest amongst the general public and increasing tourism in Herefordshire and Worcestershire

It is planned to explore the following areas as possible locations for the 12 trails: Hereford Cathedral, Hereford City Centre, Eastnor Estate, Black Mountains, Woolhope Dome, Lickey Hills,

Malvern Hills, Bredon Hill, Worcester City Centre, Abberley Hills, Cotswold Escarpment, Forest of Wyre and Rivers Severn and Teme.

In addition it is proposed to encourage schools involved in Key stage 2 to attend our indoor 'Rock and Fossil' events to find out more about the trails programme and incorporate this into schools work. The person appointed and responsible for the project will carry out a full programme of integration with primary and first schools in the two counties. The Group sees this educational aspect as a major part of the proposal and a means of promoting Earth heritage and Geoconservation at an early age.

There will also be a full programme of volunteer surveying and development; in particular visitor research and trail testing, and in addition site assessments will include links to archaeology and biology.

Earth Discovery Sites and Rock and Fossil Roadshows

The Trust is planning a major initiative to raise public awareness of Earth heritage. The project is to introduce local communities and schoolchildren to geology and landscape by identifying local sites and producing trails and site interpretation. It also involves running regular 'Rock and Fossil Roadshows' for children and parents. The Trust is currently applying to the Countryside Agency under the Local Heritage Initiative for an award to support this project. The project is a follow on from the very successful pilot Rock and Fossil Roadshows that were supported by the Local Heritage Initiative and Awards for All.

A significant part of the work is aimed at identifying local sites where the community and schools can use information produced by us to investigate and learn about Earth heritage. Such activity may take the form of guided and self guided trails in and around the selected site and ongoing exchanges of ideas and site use between the local community, the local school and the Trust. This is what we are calling our 'adopt a site' idea.

The programme is initially for 2 years but with a 'kick-start' award from LHI (and as our volunteer base is expanding all the while) we envisage that the project will continue indefinitely. We have identified user friendly sites and landscapes in a number of parishes and we hope that the local community will be keen to help us develop these and participate in the project. We know that primary and first schools in the two counties are enthusiastic about participating.

Moira Jenkins writes:

Last year we provided venues for Rockwatch to do their Roadshows for school children. Because Rockwatch stopped doing these, Herefordshire and Worcestershire Earth Heritage Trust decided to stage its own. It is so important to introduce children to geology at an early age. At the end of April we invited local schools to Rock and Fossil Roadshows. The first was held in the Shire Hall in Hereford and the second at University College Worcester.

There were a wide variety of activities for the children including plenty of things for them to take away. They made plaster of Paris models of fossils, did fossil rubbings and created Silurian seascapes. They played a board game to see who could survive as a fossil. They answered questions to identify rocks and saw the natural materials from which Brian the builder made a house. There was a display showing a wide variety of geological processes and pictures to place on a time line to show how life has changed through the ages. They identified unseen objects in feely boxes and compared and contrasted specimens studied by archaeologists, biologists and geologists.

The two days' events were very successful. The children thoroughly enjoyed themselves and the teachers appreciated help with an area of the curriculum with which many of them are not very

familiar. It was good to hear the children as they progressed round the room. "I've seen that over there." "I made a model of a trilobite." " My granny found one of those when she went on holiday and brought it back for me. What is it?" "I know what killed the dinosaurs. It was when a huge meteor hit the Earth." It is good to kindle the children's interest. When they see a rock in future many of them will stop and take a look at it. Many of them will be bringing specimens into school to show their friends and teachers.

The 'Explore' Series of Geological Trails

Worcester Cathedral Building Stones guide is now available from the Cathedral Shop, Worcester Tourist Information Centre and here at the Geological Records Centre, priced £1.95. The guide describes and explains the origins of assorted building stones, both structural and ornamental. It also points out the fossils that can be seen around the cathedral in various settings.

Severn Valley Railway Landscape and Geology trail guide has just been published and is available from various outlets, priced £1.95. This trail explains aspects of geology and landscape seen from the window of the train as it travels from Kidderminster to Bridgnorth. The story is told of the role of ice and water in the formation of the Severn Valley. We learn of the links between this evolution, landslips and river terraces. The guide also explains the different rock types visible from the window - areas characterised by soft red sandstones formed in deserts as well as the harder grey Carboniferous sandstones.

Trails currently under development are

- Great Malvern Building Stones Trail
- Malvern Hills Geology and Landscape by car
- A short Malvern Hills walking trail.

Other guides available are Glacial Lake Wigmore, Symonds Yat and Goodrich Castle Building Stones. For more information contact Ruth Thornhill at the Geological Records Centre.

Biodiversity Links

English Nature has provided funds for the production of trails, and posters for notice boards, as part of the Herefordshire Biodiversity Action Plan (BAP). These give descriptions of the fauna and flora associated with the 'Explore' series guides and various countryside locations. The trails are provided as free inserts in the guides. These and the posters highlight the links between geology and biodiversity. The project has progressed well, with 4 trail inserts and 1 notice board poster having been completed or in their final stages, but it has not been without its ups and downs.

Rollo Gillespie writes:

The Wigmore trail was the first to be completed and was ready for printing. It took a long time as it was the first and the outbreak of Foot and Mouth Disease was also a problem as access to the Castle was not possible. But it was finally "GO" for production until the disaster! On her way to Wigmore to check her trail Ruth had been diverted off the main road by works at Adforton. It was plain chance that she drove past Standleene Farm to discover that the huge oak featured in the biodiversity trail had blown over in the winter gales. However, my return to see the devastation enabled me to do a rough tree ring count - 650 years and as you will see in the following communication from Rebecca Roseff, of Herefordshire Archaeology Service, this led to an interesting story.

"Rollo, I am very interested to hear about this tree. I do try to map all ancient pollards - they are very helpful to us in understanding the landscape. Old trees are nearly always pollards (trees cut at head height) - this process continues their life. With landownership, commoners/villagers often had

the rights to lop and top trees. Such trees were often placed on boundaries. I have seen excellent large oak pollards planted on banks in Herefordshire. Obviously their presence indicates the field boundary was there and established before the tree. In your example over 650 years ago. Looking on my map your grid ref locates this to an entrance to Holly Bush Cottage...(with more information)... I can certainly have a stab at interpreting when and why the tree was planted/preserved ..."

All duly taken care of. It is nice to know that there is so much to be gained from these interdisciplinary communications.

The Symonds Yat biodiversity insert is the first to be published and is now being included in the geology guide. Two trails - 'Trees Around the Car Park' and 'On the Castle Walls' - are almost complete and ready for inclusion in Ruth's 'Explore Goodrich Castle' guides.

Whilst compiling my trails I noticed that the Herefordshire Countryside Service was under-using the notice boards at picnic sites. I felt we could get some benefit from using some of the spare space. A poster will soon be in place at Swardon Quarry (fossiliferous Silurian limestones) and work has started for Bishopswood car park. The latter is a key position, overlooking the River Wye. Significantly, when you read the notice board there you are actually standing on the Quartz Conglomerate of the Devonian. Geological resources like this are an excellent opportunity for public awareness.

Improved Exposure at Gullet Quarry

The exposures at Gullet Quarry and Gullet Pass are very significant in the geological interpretation of the structure of the Malvern Hills. As SSSIs their continuing use in research is of paramount importance. In recent years the Precambrian/Silurian junction at Gullet Quarry and the basal Cambrian Malvern Quartzite exposure at Gullet Pass have become degraded and largely lost by scree and soil creep. The improvement works recently undertaken by the Trust (as part of contract work for English Nature) involved the re-excavation and small extensions of the exposures. The results enhance the sites considerably. Gullet Pass now has the faulted junction between the Malverns Complex and the Cambrian Malvern Quartzite exposed. In addition easy access to bedding planes allows observation of quartzites and conglomerates. At Gullet Quarry the new small trench that was excavated revealed a fossiliferous basal Llandovery limestone conglomerate resting on Precambrian metamorphic rocks. Following analysis by Dr Denis Bates of Aberystwyth University, thin shales overlying the conglomerate have revealed impressive specimens of dendroid graptolites. Within the same trench just 2m to the south west the conglomerate and shales are absent. Here a shear zone approximately 0.5m thick throws the Precambrian directly against an overlying and steeply dipping Llandovery sequence of fossiliferous siltstones and shales. See stratigraphical table at the end of this newsletter.

Further work at this location is in the Trust's programme for 2002 to 2003.

An Update on the Literature Database

A database covering local Earth Sciences literature is being compiled. The aim is to include all documentation which either gives information on Earth Science sites within the counties of Herefordshire and Worcestershire or is important in establishing the regional context of this area. The database includes not only written information but also maps, section diagrams and pictures. The further aim is to link this database with the sites database being developed by the Trust and which is approaching the issue of its second version. The objective is to allow full scientific and historical information on specific sites to be gained easily and to assist site renovation and the search for new and lost sites.

The compilation of the database was begun about two years ago and is now approaching completion, in the sense that most of the important publications have now been reviewed for useful data. The rate at which new and useful documents are 'discovered' is now quite low. Searches of the on-line catalogues of the local public and university libraries and of national libraries, as well as the Web of Science and GeoRef databases have been invaluable. (Birmingham Central Library is noteworthy in holding many of the important journals, including the early ones, and being easy of access.) It has still been necessary, though, to scan the reference lists of many individual papers to trace most of the articles published before about 1980, and the texts themselves to identify useful maps, section diagrams and pictures and to gather included site information. At present, well over 2100 articles, 480 maps, 113 section diagrams and 41 pictures are listed. Of the articles, over 1000 have been inspected for further information and about 5500 references found to individual sites.

The current form of the database is a Microsoft Excel workbook. This should prove relatively straightforward to link with the Microsoft Access site database in due course. The principal worksheet lists the text articles with information on the source of the reference, the nature of the article (research paper, field guide, historical, etc.), any linked articles, the specific sites referred to and the location of the nearest library copy (closest to the Trust's office). Three further worksheets give similar information for maps, sections and pictures respectively. Other worksheets show statistical data and a listing of journal runs held in the libraries searched. A simple search facility is included which can generate reference lists on chosen topics.

The Trust has been fortunate in receiving a grant of £550 from Awards for All to help with the research costs of this work. The grant runs for twelve months from February 2002. It will be used for travel costs in visiting libraries in London, Nottingham, Oxford and Birmingham, for photocopying some of the older, less accessible and out-of-copyright material and for the purchase of books and reports found to be essential to the work of the Trust.

For more information contact Dr John Payne

Western Association DETR Project Completed

In 2000 the Trust on behalf of the Western Association (WA) constructed and submitted a successful bid to the Department of the Environment Transport and Regions (DETR) for project funding from their Environmental Action Fund. This project allowed the Western Association to distribute some £9500 to each of the partner groups (Avon RIGS Group, Gloucestershire Geoconservation, Herefordshire and Worcestershire Earth Heritage Trust, Oxfordshire RIGS Group, Shropshire RIGS Group, Warwickshire Geological Conservation Group and Wiltshire RIGS Group) for their share of the combined workload of the Association programme. The total project costs including 'in kind' matched funding was £136,000 of which DETR contributed 50%. The project has been innovative in being the first example of a collaborative bid to achieve a joint goal by local geoconservation groups in the UK. It has proved an unqualified success and has not only lead to the WA making further joint funding it has hopefully, encouraged other groups around the country to follow this same route.

The project objectives were to accelerate the rate of RIGS designations, to research, record and designate a total of 300 RIGS within the Western Association area and to produce proposals for educational and recreational use of RIGS. This was an innovative project because it was the first funding application of its type and the first regional approach to RIGS funding in England. Furthermore it incorporated a fast-track designation process and monitoring system and gave a major boost to the concept of Geodiversity.

The WA quickly established a management team to oversee the smooth delivery of the project objectives and targets. This comprised the following; Peter Oliver, Mark Campbell, Mike Windle,

Andrew Jenkinson, Andrew Matheison, Maurice Rogers and Gilbert Green. Meetings were held at either Worcester or Frombridge in Gloucestershire every month and these were used to approve expenditure and site recording targets along with all other project and decision making business. Early progress saw the appointment of 7 project officers and the establishment of 5 new computers and software at county centres. The regular meetings were also useful for the appointed project officers to share best practice experience and discuss issues and problems with the project. There were quarterly reviews of target performance against pre-set levels for site recording, expenditure, volunteer input staff costs. The management team also discussed other geoconservation issues, future funding bids and work programmes. These meetings were also used as opportunities for internal training seminars. These focused on database recording, conservation and group development.

The project suffered badly in the first 6 months from the access restrictions imposed by the "foot and mouth" outbreak in spring/summer 2001. However the project management team successfully restructured the work programme so that all objectives were still met in the original time frame. The legacy left behind has been significant. The individual groups are both organisationally and financially more secure. For some the steady income to a dedicated project officer over a 12 month period allowed their individual groups to grow and expand their horizons. The regular meetings and working relationships also allowed for an adoption of "best practice" methods and other shared experiences.

There has been a significant increase in the number of Regionally Important Geological Sites (RIGS) in the eight counties - a 60% increase. These sites will feature in future interpretation projects and conservation work. An additional benefit has been the recording databases, which in some cases have been established for the first time. All the partner groups have digital recording software on their individual group databases. This collaboration will lead to further standardisation of the WA recording software and standards and the database hardware supplied by the project will be a further legacy for years to come.

The WA committee made 4 recommendations following the completion of the project:

1. All RIGS should be monitored on a regular basis preferably more frequently than the 6 yearly visit to SSSIs. An assessment of the condition of the site should be made no less frequently than every 3 years (funding permitting!).
2. All sites should be subject to maintenance work for such matters as vegetation, fly tipping, vandalism, scree and soil encroachment and development.
3. The local heritage of these RIGS should be brought to the attention of the local authority and community groups.
4. Approaches should be made to DEFRA (Department for Environment, food and Rural Affairs) seeking recognition of the importance of RIGS in the framework of Geodiversity and the Department should be encouraged to provide funding to cover the activities of groups engaged in surveying and selecting RIGS and in the work specified above.

Lack of funding in the past had resulted in the designation of only 550 RIGS in the Western Association area in the preceding 10 years. Following the success of this project, the designation of an additional 330 RIGS (10% more than required in the contract) in one year is a major advance and contribution to the Geodiversity programme. Without funding and support from DETR this would not have been possible.

The project shows that with funding members of the Western Association can carry out important and efficient surveying and designation of RIGS and make substantial progress in the task of

completing county wide recording of the stratigraphy, petrology, palaeontology and geomorphology of these 8 counties. The success of this project shows that local geoconservation groups are capable of delivering highly competent and cost effective solutions to the issue of local involvement in land conservation. Furthermore the project has demonstrated the need for an organisation to provide the landscape designation and monitoring service that only local geoconservation groups can provide. These organisations act as a complimentary balance to the work and service provided by the Wildlife Trusts and as such are becoming an indispensable part of the conservation movement.

Director's Report to the AGM on 7th February 2002

- The year 2001 has seen some major changes for us with the completion of a number of projects and the widespread recognition of certain aspects of our work. The highlights (and difficulties) of the year are discussed below.
- After 5 years Pauline Couper left the Group and moved to a lectureship in Plymouth. The contribution that Pauline made has already been detailed in the latest newsletter but it is only right that I refer again to the important part that she played in taking the Group to its current successful position. Pauline's final report dealt with the river systems of the two counties and in particular how the fluvial features can be included in the RIGS designation process. She has made many recommendations for further surveys and hopefully the Group will be able to develop these ideas in the near future. Pauline was presented with a copy of the 769 page 'Glossary of Geology' as a leaving present.
- The Heritage Lottery Fund award finished at the end of December 2001. This has been the main support for our work since 1997 and almost everything that the Group has achieved came about as a result. The project to compile an archive and to designate RIGS has been successfully completed. The Group has a dataset of 1500 sites and 40 RIGS have been designated as part of the process. I have expressed the gratitude of the Group to HLF for such a visionary award.
- The production of an archive involved a critical assessment of the database being used. This resulted in the development of a new system by Cheryl Jones. An enormous amount of work has been put into this project by Cheryl. The Geoconservation Database is undergoing trials by Western Association members and UKRIGS is supporting the introduction of her system nationally.
- An application is with HLF for further funding to support a public awareness and education programme built around an extension of the trails guides. If successful this will be a three year project continuing the excellent work that Ruth Thornhill has been undertaking. Ruth has produced three trail guides to date, Wigmore Glacial Lake, Goodrich Castle and Symonds Yat. All have been very well received and are selling well. Indeed the Wigmore guide was awarded the LASMO prize for 2001 - a wonderful achievement.
- After the success with the Rockwatch Roadshows last year the Group decided to set up its own programme with a view to providing regular events for schools. To this end Rollo Gillespie has obtained funding from Awards For All to purchase the materials needed for the events. The first two events are provisionally programmed for the end of April. A lot of hard work is required to prepare for this date and any assistance from members will be appreciated.
- The Western Association of RIGS Groups has had a very productive year following the award of £68,000 from DETR that our group obtained and that was divided amongst the 7 members. The project which ends in March is on target to complete the designation of 300 new RIGS. Regular meetings of member groups successfully improved techniques and developed ideas. Attempts are now being made to attract new funding for the WA.

- As far as new projects for our own Group are concerned the concentration has been on Earth Discovery Zones. This is an idea to develop urban trails based on building stones, natural landscapes and rock outcrops in and adjacent to towns. There are plans to locate site interpretation boards, produce self guided and guided trails and to involve schools in follow up work. Applications for funding have been made to DEFRA, New Opportunities Fund and COPUS (Royal Society). There have been expressions of support for the proposals from the local authorities and if successful the project will splendidly complement our rural trails programme.
- Alongside these awareness programmes there is the continuing core work of site recording and RIGS designation. By the end of March the Group will have designated 70 RIGS. The problem that confronts all RIGS groups is how to fund this work. Grant giving organisations believe that this is a statutory requirement and therefore central or local government should support it. I have been involved in attempting to get the message across to DEFRA on this issue where there is some recognition of the problem. It is this issue that we have to address over the coming years to ensure survival of RIGS groups.
- Alex Jones produced an excellent Health and Safety booklet for fieldwork, which should now be with all members. This work was funded by Herefordshire Council and Advantage West Midlands.
- Phase one of the Local Heritage Initiative project has now been completed with a strong possibility of a second award to carry on the work of running Rock and Fossil Roadshows.
- Surveys and enhancement work on SSSIs for English Nature continue where the Group has been recognised as providing a sound professional approach to this work.
- The Group has made important contributions to the Structure and Local Plans of Herefordshire, Worcestershire, Worcester and Wyre Forest Councils. We have also been contacted by Redditch, Malvern Hills, Bromsgrove and Wychavon Councils. Hopefully there will be significant emphasis on Earth Heritage conservation in these plans when they are published over the next two years.
- Finally it is important that I record the thanks of the GRC staff to the volunteers. There is an active group of about 10 people. Without the input on trail testing, site recording, site conservation work and rock and fossil roadshows we would indeed struggle to survive. I hope we can encourage new members over the coming months.

The following were elected to the Executive Committee at the AGM: Les Morris (Chairman), Moira Jenkins, Cheryl Jones, John Medley, and Peter Thomson. John Payne was later co-opted onto the Committee.

Sponsors

The organisations listed below have supported the Trust with awards over the last 6 years. Without this financial assistance progress to date would have been considerably less. The Trust extends its thanks.

- University College Worcester
- Heritage Lottery Fund
- English Nature
- Herefordshire Council
- Worcestershire County Council

- Department of the Environment Transport and the Regions
- Local Heritage Initiative
- European Regional Development Fund
- Advantage West Midlands
- Severn Waste Environment Fund
- Malvern Hills Area of Outstanding Natural Beauty
- Wye Valley Area of Outstanding Natural Beauty
- Awards for All
- Geologists Association
- Hanson Environment Fund

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